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Invasive Aspergillosis in Cancer Patients

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INVASIVE ASPERGILLOSIS is the commonest form of aspergillosis in the immunocompromised patient and is often fatal even if diagnosed and treated [1, 2].

In an effort to identify predisposing factors for *aspergillus* infection we undertook a review of all patients diagnosed with aspergillosis in the Medical Oncology Department at the Christie Hospital, Manchester between April 1987 and October 1991.

Patients were included in the study on the basis of two or more positive sputum cultures or a single positive culture from bronchoalveolar lavage associated with symptoms, signs and investigations compatible with a diagnosis of invasive aspergillosis or on the basis of histologically proven *aspergillus* infection at autopsy.

A diagnosis of invasive aspergillosis was made in 27 patients out of a total of 3651 treated in the department during the 55-month period. 22 (81%) of the patients were male and 5 (19%) were female, the age range being 30–68 years with a median of 56. The largest subset of patients with aspergillosis had acute myeloid leukaemia (AML). Their median age was 61 as compared with a median of 54 for all AML patients seen in the same period. Disease details are shown in Table 1.

Neutropenia was a probable contributing factor in 19 (70%) of the 27 patients and 11 (41%) of the patients were on corticosteroids. All patients had received intensive chemotherapy. 5 had had bone marrow transplants. 25 (93%) of the 27 patients had had one or more courses of systemically administered broad spectrum antibiotics in the 2-month interval preceding the diagnosis of aspergillosis.

Table 1. Disease status at time of diagnosis of aspergillosis

Disease	Total number of patients	Disease status: Remission induction	Disease status: Complete remission	Disease status: Relapse
AML	11	4	7	0
ALL	5	2	0	3
NHL	6	2	1	3
Hodgkin's lymphoma	3	0	0	3
Multiple myeloma	1	0	1	0
Others	1	0	0	1
Total	27 (100%)	8 (30%)	9 (33%)	10 (37%)

AML = Acute myeloid leukaemia; NHL = non-Hodgkin lymphoma; ALL = acute lymphoblastic leukaemia.

All patients were symptomatic. The commonest symptoms were cough, dyspnoea and fever. 4 of the 27 patients had normal chest X-rays. Chest X-ray abnormalities included non-specific inflammatory changes, cavities and nodular opacities. Initial diagnosis was by sputum culture in 11 patients; clinically suspected in 14 patients, followed by a positive sputum culture for *aspergillus* in 8 of these; and at postmortem in 2 patients where the diagnosis was not suspected during life. 4 patients underwent bronchoscopy for suspected pulmonary aspergillosis and all 4 bronchial washings grew *A. fumigatus*. All of the isolates were *A. fumigatus*. 21 of the 25 (84%) died within 4 months of diagnosis of aspergillosis, with a median survival time of 4 weeks. The 4 patients who survived had either non-Hodgkin lymphoma or Hodgkin's lymphoma. The lung was the commonest site of invasion, found in 13 (81%) of the 16 patients who had postmortem examinations. 5 of the 16 patients had extrapulmonary involvement including gastrointestinal tract, heart, thyroid, kidneys and brain. 8 patients had evidence of vascular invasion on autopsy. Thirty-nine percent of the 23 patients who died were still neutropenic at death.

As a result of our study we identified elderly males as being particularly at risk of invasive aspergillosis. We also emphasise that the diagnosis should be considered even in patients who are not neutropenic and who appear to be in remission.

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The Information Given to the Terminal Patient With Cancer

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THE APPROACH to the provision of information to patients varies from one country to another, especially in oncology [1, 2]. In EEUU, for instance, doctors usually tell their patients everything regarding the diagnosis and prognosis of the disease. In other countries, such as Spain, the truth is seldom revealed. Which is the better option?

We interviewed 50 oncologists to assess how they inform their patients and 56 terminal patients and their relatives to discover what they thought about this information. The survey was performed in the Departments of Medical Oncology of three general hospitals in Madrid.

66% of the patients thought that the information provided was scanty. They were more worried about the prognosis than about diagnosis or the side-effects of therapy. This could have been

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because all of them were terminally ill (1–3 months life-expectancy).

We asked relatives if they wanted the patient to be informed about his/her illness. The answers were "No" in 73% of the cases and "Yes" in 23%. On the contrary, when asked if they would like to be informed in the event that they were ill, 65% answered "Yes" and 26% "No".

18% of the doctors did not inform in a routine way, 30% informed continuously, and 52% gave information depending on the situation. Information about the side-effects of therapy was supplied more often than diagnosis and prognosis. After telling the patients that they had cancer, 62% of the doctors reported a more positive attitude than the relatives could have imagined. Furthermore, many of the patients seemed more willing to cooperate with the medical team.

We have coined the term "bearable truth" to define how cancer patients should receive information [3]. This term has two different aspects. Firstly, patients must always be given the truth. If we lie, the patient will lose his/her confidence in us. Secondly, we must provide information that the patient can endure. Doctors have to talk to their patients to know when and what to say, usually a long process [4]. Our survey shows that cancer patients generally want to know more than their relatives and doctors are willing to reveal. An informed patient is also less anxious and more cooperative. It is therefore important that we make an effort to improve our ability to inform.

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Correction The original version of the following paper, published in the *European Journal of Cancer* 1993, volume 29A, no. 4, pp. 592–595, contains errors and has been withdrawn.

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Primary Medical (Neo-adjuvant) Chemotherapy for Operable Breast Cancer

Ian E. Smith, Alison L. Jones, Mary E.R. O'Brien, J.A. McKinna, Nigel Sacks and Michael Baum

84 patients with large operable breast cancer have been treated with primary medical chemotherapy rather than mastectomy in three sequential studies. 86% had tumours greater than 4 cm in diameter; median diameter was 6 cm (range 1–12). Median age was 46 years (range 23–66). In the first two studies 64 patients were treated with either CMF [cyclophosphamide 100 mg orally days 1–14, methotrexate 50 mg intravenously (i.v.) days 1 and 8, and 5-fluorouracil 1 g i.v. days 1 and 8, repeating at 28-day intervals for six courses] or MMM (mitozantrone 8 mg/m² i.v. once every 3 weeks, methotrexate 50 mg i.v. once every 3 weeks, mytomycin C 8 mg/m² once every 6 weeks, for 8 courses). 69% achieved an overall response including 17% complete remissions. 27% have had local relapse but only 3% uncontrolled local relapse. Only 14% have required mastectomy. In the third study which is ongoing, 19 patients have been treated with infusional FEC (5-fluorouracil 200 mg/m² i.v. 24 hourly by continuous infusion via a Hickman line for 6 months, epirubicin 50 mg/m² i.v. bolus once every 3 weeks for 6 months, cisplatin 60 mg/m² i.v. once every 3 weeks for 6 months with appropriate intravenous hydration). Overall response rate so far is 84% with 58% complete remissions. There have been no local relapses and no patient has required mastectomy. This study demonstrates that primary medical chemotherapy can be used to avoid mastectomy in the great majority of patients presenting with large operable primary breast cancer. Infusional FEC may be more active than conventional chemotherapy in terms of overall response and complete remission rate, and infusional FEC chemotherapy now needs to be compared with conventional chemotherapy. The concept of primary medical therapy should also be compared with conventional mastectomy followed by adjuvant chemotherapy.
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INTRODUCTION

THE CONVENTIONAL approach to the systemic management of early breast cancer is to give adjuvant chemotherapy or endocrine therapy postoperatively, after surgical excision of the primary tumour. In primary medical therapy (also called neo-adjuvant therapy) the roles are reversed, and chemotherapy and/or endocrine therapy is given as first-line treatment to try to achieve tumour regression before surgery. The origins of primary medical therapy lie in experience gained in the management of locally advanced inoperable breast cancer; here medical treatment has been used increasingly in recent years prior to local radiotherapy to try to improve local control and prolong survival [1].